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ABSTRACT

Differential perceptions of standard, established jobs in a stable organization (telephone company plant department) were obtained for sixteen jobs rated by job incumbents, peers, and supervisors on eight characteristics (variety, autonomy, task identity, feedback, friendship opportunities, dealing with others, prestige compared to craft jobs, and prestige compared to other jobs) on seven-point Likert-type scales. The ratings of peers and supervisors were more similar to each other than either set was to the ratings of incumbents. Incumbents in entry level jobs evaluated their jobs more highly than did their peers or supervisors, while incumbents in highly skilled terminal craft jobs evaluated their jobs less positively. Results of the study are discussed in terms of the social and psychological processes that may have influenced the various groups' ratings. (Author/MS)

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# PERCEIVING JOBS IN THE ORGANIZATION

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13. ABSTRACT

Differential perceptions of standard and long established jobs in a stable organization were obtained for sixteen jobs rated on eight characteristics by job incumbents, peers, and supervisors. The ratings of peers and supervisors were more similar to each other than either set was to the ratings of incumbents. Incumbents in entry-level jobs evaluated such jobs more highly than did their peers or supervisors, while incumbents in highly skilled terminal-type craft jobs evaluated their jobs less positively than did their peers or supervisors. For certain of the eight job characteristics incumbents consistently rated their job more positively than did the other two groups rating these jobs, while for other characteristics incumbents rated their jobs less positively. Results of the study are discussed in terms of the social and psychological processes that may have influenced the various groups' ratings.

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| Differential Perception | | | | | | |
| Perceptual Structure | | | | | | |

# PERCEIVING JOBS IN THE ORGANIZATION

Robert Dubin, Lyman W. Porter, Eugene F. Stone, and Joseph E. Champoux[1]

University of California, Irvine

A social setting is subject to variable perceptions by its participants, and a work organization is one such setting that exhibits this characteristic. Can a work organization be considered the simple sum of the collective perceptions of its participants and/or customers clients? The present study is concerned with examining whether organizational participants have very different perceptions of standard and established features of their employing organization. We found considerable variability exhibited among individuals, as well as in group perceptions of organizational characteristics. In this study, sixteen jobs which have stable job content and which are part of a very stable organization, were investigated. The varying perceptions of the job characteristics by individuals, and by categories of individuals, constitute the research problem.

## Related Research

Differential perception of the features of work and working environments have been reported in a wide range of studies. We cite only representative examples here. The literature reveals: that communications are differentially perceived by sender and receiver (Burns, 1954; Weinshall, 1964); and that authority relations are perceived differently by authority holders and their subordinates (Brown, 1960). Work groups have differential perceptions of their work situation and relation to authority (Sayles, 1958); the play element in working behavior is perceived differently by workers, researchers and managers (Roethlisberger & Dickson, 1939; Roy, 1960); and managerial pater-

nalism has been practiced from one perceptual standpoint but received from a very different perceptual stance (Dubin & Wray, 1953). Technical work interactions have been perceived differently by the parties involved (Whyte, 1948), as, obviously have been the interactions in collective bargaining between company and union negotiators (e.g., Chamberlain, 1951). Executives perceive a set of acts from the perspective of their functional departments (Dearborn & Simon, 1958); scientists employed in industry perceive the greater legitimacy of colleague authority over line authority (Marcson, 1960); while librarians have been shown selectively to perceive and respond to the demands of their client groups (Meier, 1963).

## Theory

An organization can be all things to all men. The fundamental implication of this is that a wide variety of personal goals, expectations, and perceived rewards may be encompassed within a work organization and the individual-organization nexus sustained because each participant finds what he wants to find within the work setting. The mechanism is his selective and differential perception of the work environment. The adaptation of Man to complex environment requires neither uniform environment, nor identical men. What mediates the ability of individuals to adapt to complex environments, each in his own way, is the fact that individual differences in perception permit a selection, among available features of the environment, of those to which the individual chooses to react. The same objective situation affords its several participants individual opportunity to select limited features of it and then respond. It would be far more surprising that different individuals have similar or identical perceptions, than that they do not. It would be even more surprising if a complex environment, such

as that of a work organization, was characterized by such order and uniformity that its stimulus value would be consistently alike for its members. Individuals clearly vary in goals, norms, behavior repertoires, and perceptions. Complex environments provide opportunities for "packaging" their features in different combinations. The individual finds ample opportunity to "fit" his idiosyncratic self into the complex environment in an adaptive fashion.

In summary, the linkage between individual and organization may be facilitated by the ability of individuals to perceive their organizational environment in the way they want to see it, permitting individuals with varying expectations and backgrounds to adapt to the same general organizational environment by "fitting" their expectations to their unique perception of the organization, or any of its features. This fundamental paradigm underlies theories of organizational behavior that emphasize maximizing autonomy for the individual. Autonomy implies not only the opportunity to select one's own behavior but also the ability to utilize one's own perceptions of the environment in which such behavior is enacted in order to work out a personal adaptation to it (Argyris, 1964).

## The Study

A large public utility, a telephone company, has a principal division, the Plant Department, whose function is to install equipment in the central office, at the customer's location, and link the two. Within the Plant Department are sixteen jobs that have existed for a long period of time and that are characterized by stable job descriptions. There is relatively low turnover within the divisions of the Plant Department so that job incumbents are thoroughly familiar with their own jobs and, because of preference given to internal moves for promotion, those occupying jobs above entry-level are

usually knowledgeable about entry-level jobs, and surrounding jobs at all levels. Furthermore, the supervisory personnel are typically recruited within the organization from the sixteen craft occupations and are, therefore, knowledgeable about them. The structure and departmentalization of this division of the company has been stable over a number of years. In short, we are dealing with an organizational situation in which there are relatively few jobs, with stable job descriptions in a stable relationship to each other, and that are widely known for their job content beyond the job incumbents.

Subjects

Three separate groups of organizational members rated the jobs (as described below): job incumbents, peers (i.e., other craft workers in the department) and supervisors. Craft workers in the sixteen jobs rated their own jobs and any other craft jobs with which they were familiar (to a maximum of four). Supervisors rated as many of the same craft jobs as they were familiar with. A total of 164 ratings were obtained from incumbents rating their own jobs. Craft workers, in addition, supplied 189 ratings of jobs other than their own (peer ratings). Supervisors provided a total of 270 ratings.

Sampling Procedure

Individuals who participated in the study worked at one of fourteen locations in the Southern California area. (The company employs approximately 1,000 craft workers who work at 35 locations in the division selected for study.) Since the characteristics of a given job do not vary appreciably from one location to another in the division a decision was made to sample from a minimum number of locations to meet sampling quotas.

Quotas established for ratings from each of the three groups were 5 to 20 ratings per job. These goals were met in all but two instances (no

peer ratings were obtained for the job of Building Mechanic and only 4 peer ratings were obtained for the job of Reports Clerk).

Data Collection Procedure

Data were collected from the respondents within a three week period. Each participating supervisor was given a packet containing a list of the sixteen jobs to be rated, rating forms for each job, and an instruction sheet. The instructions made it clear that only those jobs with which a supervisor was familiar were to be rated by him. In addition, the supervisors were verbally cautioned against discussing their ratings with others in the organization. Within a week of the time that the rating packets were distributed to supervisors all completed ratings were collected. Sixty-nine percent of all supervisors initially contacted ultimately returned completed rating forms to the researchers.

Craft workers made their ratings in groups of approximately 15 persons each. Sessions lasted about twenty minutes each. Anonymity was assured to those who came to the group meeting, and none refused to participate. Completed ratings were collected from the respondents at the end of each session and they were thanked for their participation in the study.

Instrument

The instrument used to obtain data on the characteristics of jobs was a modified version of that developed by Hackman and Lawler (1971). Eight job characteristics constituted the dimensions on which jobs were rated. These are:

1. Variety: the extent to which the individual uses different procedures and equipment in doing his work.
2. Autonomy: the extent to which the individual has discretion over the scheduling and execution of job related tasks.

3. Task identity: the extent to which the individual makes what he considers to be an identifiable contribution to some product or service produced by his organization.
4. Feedback: the extent to which the individual receives information about his performance while doing his job.
5. Friendship opportunities: the extent to which the individual can talk to other employees about matters not related to the job.
6. Dealing with others: the extent to which working with others is an important part of the job an individual does.
7. Prestige (craft jobs as a reference group): the extent to which an individual perceives his job as being prestigious when compared with other craft jobs in the company.
8. Prestige (all other jobs as a reference group): the extent to which an individual perceives his job as being prestigious when compared with all other jobs in the company.

A seven point Likert-type scale was provided for each item in the instrument. The midpoint as well as the two end points on each scale were labelled. (See Hackman and Lawler, 1971, for additional information on the questionnaire.)

## Results

### Within rater-group variability

Means for the sixteen jobs on the eight job characteristics are shown in Table 1. Although sample variances are not presented in the table it should

- - - - - - - - - - - - - -

Insert Table 1 About Here

- - - - - - - - - - - - - -

be noted that there was evidence of differential variability among rater

groups in evaluating the same job characteristics of the same job. In the case of Line Assigner, for example, sample variances on the feedback dimension were 1.7, 2.7 and 5.3 for supervisors, incumbents, and peers, respectively. From these data it can be seen that peers as a group had much greater variability in perceptions of feedback provided Line Assigners than did incumbents and supervisors. While only one example of within group variability is provided, it should be noted that there were many other instances of differential within group variability. In the interest of brevity, these were not, individually, commented upon here[2].

Between-Group Perceptual Differences

In order to assess the perceived dissimilarities among jobs for a given rater group, profiles were constructed for each job. This resulted in a set of sixteen job profiles involving eight dimensions for each rater group. Profile similarity was assessed by computing inter-profile (Euclidian) distances. A sixteen by sixteen matrix for each rater group resulted from this procedure. Entries in these matrices will be referred to as original distances.

Original distances for each rater group were analyzed by the TORSCA nonmetric multidimensional scaling program (Young & Torgerson, 1957). Solutions ranging from two to seven dimensions were obtained for each group's original distances. Using standard criteria (cf. Shepard, 1972, pp. 9-10), the "best" reduced dimension configuration was selected. A three-dimensional configuration was deemed "best" for all three rater groups' solutions. Of course, the three dimensions may not be the same across the three groups since the multidimensional scaling was done independently for each group. We will, therefore, be analyzing the relations among the sixteen jobs within the perceptual structure of each rater group, and then will compare the total configuration of job distances among the three rater groups.

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Insert Figure 1 About Here

- - - - - - - - - - - - - -

The TORSCA configuration based upon incumbent's original distances is shown in Figure 1A. Some jobs are viewed as being very similar as is evidenced by their relative proximity in the three-dimensional space. Other jobs are very dissimilar, revealed by their being far apart in the space. For example, the jobs of Line Assigner and Plant Reports Clerk are perceived similarly by their incumbents, while Supplyman and Station Repairman are viewed as being quite dissimilar. Interjob distances ranged from 0.191 (indicating that Deskmen and C. O. Equipmentmen have similar jobs) to 1.794 (showing that Line Assigners and Linemen have the most dissimilar jobs).

The same kind of data are presented in Figure 1B for the supervisors' ratings of the sixteen jobs. The jobs evaluated as most similar were PBX Installer and Repairman (interjob distance is 0.208) while the least similar jobs were PBX Repairman and Messenger (interjob distance is 2.098). In Figure 1C the comparable data are presented for the evaluations by peers. The most similar jobs, in the view of the peers, are Supplyman and Frameman (interjob distance is 0.262) and the most dissimilar jobs are PBX Repairman and Messenger (interjob distance is 2.327).

Inspection of Figure 1 and the data in Table 1 suggest that peers and supervisors have relatively congruous perceptions of the similarities and differences among the jobs studied. Incumbents' perceptions of the jobs accord less well with either supervisors' or peers' perceptions. To assess quantitatively the extent to which jobs were similarly perceived by the three rater groups, interjob distances were used to compute product-moment correlations

among distances for all possible pairs of rater groups. The correlations in each case are based on an N of 120 distances. The correlation coefficients are:

Incumbents and Peers, r = .11

Incumbents and Supervisors, r = .22

Supervisors and Peers, r = .78

These results clearly indicate that supervisors and peers evaluated the sixteen jobs from a similar perceptual structure. The job incumbents as a group see their own jobs in a distinctive manner.

Incumbent Perceptions Vs. Those of Others

We now consider the question of whether there are systematic differences in the job incumbent ratings of their own job vs. the ratings by others (supervisors and peers). Table 2 shows the results of comparing incumbents' means on the eight job characteristics with those of others (peers and supervisors). The means for others were computed using combined ratings of peers and supervisors. For example, in the case of the "Dealing with Others" dimension for the job of Line Assigner, the mean (4.6) for others was based upon 10 peer and 21 supervisor ratings. A plus (+) entry in Table 2 indicates that the incumbents rated the job characteristic higher than the combined mean rating by supervisors and peers, while a minus (-) indicates the incumbent mean was lower and an equal sign(=) indicates that the incumbent mean was the same as that of the other raters.

Two features of Table 2 are notable. There are jobs for which incumbents consistently rate features of their own jobs differently, relative to the ratings by others. There are also job characteristics for which the incumbents consistently differ with the ratings by others. We will examine each of these findings.

The first six jobs listed in Table 2 are ones for which the job incumbents rate their own job more highly than others (supervisors and peers) on six, seven, or eight of the eight job characteristics being evaluated. It is notable that five of these six positions, Messenger, Supplyman, Frameman, Plant Service Clerk and Plant Reports Clerk are entry-level and the among lowest paid craft jobs. Within this organization it is clear that newcomers to the company, and those with the lowest pay levels characteristically value higher almost all features of their jobs relative to the views held by other organization members who also know the jobs.

The last three jobs in Table 2 are the ones for which the job incumbents rate their own job below the ratings of others on six, seven, or eight of the eight job characteristics being evaluated. All three jobs, Splicer, PBX Installer and PBX Repairman are skilled, top or terminal-jobs in their respective job progression ladders, any move beyond them being into supervision. These results suggest that the tendency to rate one's own job lower than others rate the job may be associated with holding a terminal-job in the organization.

An examination of the columns of Table 2 reveals the job characteristics which incumbents differentially rate relative to the combined perceptions of peers and supervisors. If we compare the three job characteristics on the left hand side of the table (incumbents in 11 or more jobs rate them higher than do others) with the three on the right hand side of the table (incumbents in half or more of the jobs rate job features lower than do others) two interesting conclusions emerge. On one measure of sociability (Dealing with Others - see definition above) and several intrinsic job characteristics (Autonomy and Variety) people holding the jobs rate them more highly than those who know the job from the outside. On the other hand, for several forms

of linkage with his environment that characterize what he does in relation to a collective output (Task Identity), what he gets back from the environment in the form of evaluation of his performance (Feedback) and where his job stands in relation to other jobs (Prestige - Craft) the job holder gives a lower rating to his own job than others do.

We may summarize the findings as follows:

1. There is differential intra-group variability in ratings on identical characteristics of an identical job;

2. There are substantial differences between the perceptual space within which incumbents view their own job, and the perceptual space utilized by peers and supervisors who know the jobs;

3. Supervisors and peers have relative similarity in the perceptual space that each group utilizes in rating jobs of other employees;

4. Entry-level jobs are the ones in which incumbents rate their job characteristics higher than the ratings by others;

5. High skilled, terminal-jobs are the ones in which incumbents rate their job characteristics lower than the rating of others;

6. Sociability and several intrinsic characteristics of jobs are rated higher by incumbents than by others; and,

7. Several job features linking the individual with his work are rated lower by job incumbents than by others.

## Discussion

The first three research results just summarized clearly lead to the conclusion that the organizational environment is differentially perceived. This finding is especially strong since we chose to measure perceptions of well known jobs that had been stable for a long period of time and that were

found in a stable organization. Furthermore, we measured the perceptions only of members of the organization who had considerable familiarity with the jobs being studied. In short, when objective features of a work organization are evaluated by knowledgeable members of it there is a lack of consensus among their perceptions. What then is likely to be the case if members of a work organization evaluate such subjective features of it as "organizational climate?" We believe that subjective organizational features would be perceived with even greater variability than what we have found to true with respect to jobs.

The last four research results summarized above tell us something about the dynamics of differential perception. The tendency of newer employees in entry-level and lower paying jobs to rate one's own job highly may result from what Thibaut and Kelley have labelled "idealization" (1959, pp. 90-97). Idealization is said to occur when a person evaluates his present situation more in terms of rewards than of costs. This could describe the orientation of the groups of entry-level persons who rated their own jobs higher than did their peers and supervisors. On the other hand, Thibaut and Kelley also suggest that when an individual evaluates his situation by emphasizing costs over rewards, he may be engaging in what they call "debunking" (ibid.). This psychological orientation could very well characterize the high skilled, long service employees who make up the three job groups in which there is consistent lower rating of their own jobs relative to the evaluations of thers. These individuals are aware that they occupy terminal-positions and indeed, see relatively little more in the way of rewards forthcoming (cf. Coates and Pellegrin, 1957). Such individuals may be the "downwardly anchored" persons who measure their career progress from how far they have already come from their occupational starting point (Tausky & Dubin, 1965).

When attention is turned to the characteristics of jobs being evaluated, differential evaluation of job features appears systematic. On one sociability feature of jobs, which we measured in the characteristic, Dealing with Others, incumbents had higher ratings than others. The same was true of two intrinsic job features (autonomy and variety). Two explanations are possible. A first explanation may be that incumbents are likely to have greater knowledge of these features of their own work than others do, and that may account for the difference found. A second explanation may relate to the fact that autonomy and variety (and perhaps even sociability) have come to have socially approved status as features of jobs which leads incumbents to claim that their own jobs possess more of these characteristics than others accord to them. (cf. Rossi & Inkeles, 1957).

The features of jobs that incumbents rate lower than the rating by others share the characteristic that they link the individual with some major feature of his own work and work environment. This linkage is (1) to the product (Task Identity); (2) to his own performance (Feedback); and to his occupational status (Prestige - craft). Perhaps those who fill industrial jobs are not sanguine about their contribution to the enterprise, or the worth of their own performance, or even their prestige in the shop. We may speculate that this "putting down" of the linking features of one's own job may be: (1) a reality in which such linkages are truly weaker than outsiders can determine by observation of, or contact with a job; or (2) part of the oft-noted "alienation" of industrial workers which accompanies their perception that their linkage with the industrial enterprise is attenuated. Either of these interpretations would be worthy of further investigation.

The perception of the work environment is hardly uniform across an employee group. We think we have demonstrated this clearly with a study of the differential perceptions of some relatively simple and stable features of an organization. If differential perception of the work environment is the clinical reality of work organizations then is it possible that this very human condition may be functional for organization? Does the opportunity to see what each worker "wants" to see in work make it possible to adapt to a wide variety of employment circumstances?

References

Argyris, C. Integrating the individual and the organization. New York: Wiley, 1964.

Brown, W. Exploration in management. New York: Wiley, 1960.

Burns, T. The direction of activity and communication in a departmental executive group: A quantitative study in a British engineering factory with a self-recorder technique. Human Relations, 1954, 7, 73-79.

Chamberlain, N. W. Collective bargaining. New York: McGraw-Hill, 1951.

Coates, C. H. & Pellegrin, R. J. Executives and supervisors: Contrasting self-conceptions and conceptions of each other. American Sociological Review, 1957, 22, 217-220.

Dearborn, D. C. & Simon, H. A. Selective perception: A note on the departmental identification of executives. Sociometry, 1958, 21, 140-144.

Dubin, R. & Wray, D. C. Case study 2: Metal products. In M. Derber (Ed.), Labor-management relations in Illini City. Urbana, Ill.: Institute of Labor and Industrial Relations, University of Illinois, 1953.

Hackman, J. R. & Lawler, E. E., III. Employee reactions to job characteristics. Journal of Applied Psychology, 1971, 55, 259-286.

Marcson, S. The scientist in American industry. Princeton: Industrial Relations Section, Princeton University, 1960.

Meier, R. Information input overload: Features of growth in communications-oriented institutions. Libri, 1963, 13, 1-44.

Roethlisberger, F. J. & Dickson, W. J. Management and the worker. Cambridge: Harvard University Press, 1939.

Rossi, P. H. & Inkeles, A. Multidimensional ratings of occupations. Sociometry, 1957, 20, 234-251.

Roy, D. F. 'Banana Time': Job satisfaction and informal interaction. Human Organization, 1960, 18, 158-168.

Sayles, L. R. Behavior of industrial work groups: Prediction and control. New York: Wiley, 1958.

Shepard, R. N. Introduction to Volume 1. In R. N. Shepard, A. K. Romney, and S. B. Nerlove (Eds.), Multidimensional scaling. New York: Seminar Press, 1972.

Tausky, C. & Dubin, R. Career anchorage: Managerial mobility motivations. American Sociological Review, 1965, 30, 725-735.

Thibaut, J. W. & Kelley, H. H. The social psychology of groups. New York: John Wiley & Sons, 1959.

Weinshall, T. D. Communicogram: A way to describe the pattern, frequency, and accuracy of organizational communication. Haifa: Technion, Israel Institute Of Technology, 1964, mimeographed.

Whyte, W. F. Human relations in the restaurant industry. New York: McGraw-Hill, 1948.

Young, F. W. & Torgerson, W. S. TORSCA: A fortran IV program for Shepard-Kruskal multidimensional scaling analysis. Behavioral Science, 1967, 12, 1948.

## Footnotes

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Professor Champoux is now at the University of New Mexico.

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[2]A table showing sample variances will, upon request, be supplied by the senior author.

TABLE 1

Mean Scores for Jobs on Job Characteristics Variables

| Job Characteristics | | Job Number[a] | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 1 Variety | I[b] | 5.25 | 5.30 | 5.14 | 5.14 | 5.29 | 4.70 | 3.00 | 3.20 | 5.22 | 4.25 | 4.82 | 5.60 | 3.50 | 4.69 | 6.38 | 4.18 |
| | P | 3.80 | 5.93 | 6.71 | 4.41 | 5.31 | 3.60 | 3.08 | 1.55 | NA | 3.33 | 4.45 | 4.50 | 2.33 | 3.67 | 5.50 | 4.25 |
| | S | 3.78 | 5.77 | 6.22 | 4.40 | 4.96 | 4.00 | 2.20 | 1.50 | 5.89 | 4.92 | 4.29 | 4.92 | 2.57 | 2.81 | 4.62 | 4.22 |
| 2 Autonomy | I | 4.82 | 4.80 | 4.29 | 4.36 | 5.14 | 5.40 | 4.13 | 4.20 | 4.56 | 4.38 | 3.36 | 4.80 | 4.17 | 4.50 | 4.50 | 4.18 |
| | P | 4.70 | 5.40 | 6.00 | 4.94 | 5.69 | 3.90 | 3.75 | 2.18 | NA | 4.00 | 3.36 | 3.75 | 2.56 | 3.33 | 4.83 | 3.25 |
| | S | 4.74 | 5.15 | 5.70 | 4.76 | 5.33 | 4.43 | 2.60 | 1.60 | 4.22 | 4.33 | 3.43 | 4.15 | 2.50 | 2.94 | 4.14 | 4.22 |
| 3 Task Identity | I | 3.67 | 6.20 | 4.14 | 4.92 | 5.86 | 5.80 | 3.80 | 3.80 | 4.78 | 4.63 | 2.55 | 4.00 | 4.67 | 5.00 | 4.88 | 3.91 |
| | P | 4.20 | 6.53 | 5.86 | 6.22 | 5.56 | 4.80 | 3.67 | 4.18 | NA | 3.50 | 4.00 | 4.25 | 4.28 | 3.58 | 5.50 | 6.00 |
| | S | 3.70 | 6.12 | 6.13 | 6.28 | 5.75 | 4.95 | 4.20 | 4.30 | 5.56 | 5.92 | 3.71 | 5.08 | 3.71 | 3.06 | 5.00 | 4.22 |
| 4 Feedback | I | 4.17 | 4.90 | 3.86 | 4.92 | 4.86 | 5.50 | 4.73 | 4.67 | 4.78 | 3.75 | 3.64 | 4.00 | 4.50 | 5.19 | 5.25 | 4.55 |
| | P | 4.70 | 5.00 | 6.43 | 5.56 | 5.00 | 5.20 | 4.25 | 3.82 | NA | 5.00 | 4.82 | 4.38 | 4.44 | 4.42 | 5.00 | 4.00 |
| | S | 4.30 | 5.38 | 5.70 | 5.40 | 5.21 | 5.19 | 3.70 | 3.90 | 4.67 | 5.08 | 4.50 | 3.92 | 4.14 | 3.50 | 5.00 | 4.22 |
| 5 Friendship Opportunities | I | 5.50 | 3.90 | 4.00 | 4.79 | 2.57 | 5.40 | 6.73 | 5.67 | 4.44 | 4.13 | 4.82 | 5.20 | 5.83 | 4.44 | 4.88 | 5.27 |
| | P | 4.50 | 5.20 | 4.71 | 3.09 | 3.81 | 4.90 | 5.50 | 5.00 | NA | 3.50 | 3.73 | 4.88 | 5.17 | 4.67 | 5.33 | 3.75 |
| | S | 5.74 | 4.85 | 4.57 | 3.80 | 4.42 | 4.86 | 4.20 | 3.80 | 4.89 | 3.58 | 4.00 | 4.38 | 4.14 | 5.00 | 5.76 | 5.56 |
| 6 Dealing with Others | I | 7.00 | 6.20 | 4.29 | 6.0 | 6.00 | 5.60 | 4.27 | 4.60 | 5.22 | 3.25 | 4.55 | 6.40 | 5.00 | 5.63 | 5.88 | 4.36 |
| | P | 5.90 | 5.87 | 6.71 | 6.06 | 5.94 | 4.30 | 3.58 | 3.41 | NA | 3.83 | 3.73 | 3.75 | 4.00 | 4.92 | 4.83 | 5.25 |
| | S | 6.48 | 5.50 | 6.04 | 5.52 | 6.08 | 4.81 | 3.30 | 3.20 | 4.89 | 3.67 | 3.57 | 3.92 | 3.93 | 4.56 | 5.19 | 4.56 |
| 7 Prestige (Craft Reference Group) | I | 4.92 | 4.50 | 3.29 | 4.29 | 4.29 | 4.90 | 2.53 | 2.33 | 2.44 | 2.88 | 2.82 | 5.00 | 2.33 | 3.50 | 5.00 | 3.45 |
| | P | 5.40 | 4.93 | 6.00 | 3.47 | 3.88 | 4.00 | 2.00 | 1.32 | NA | 4.17 | 3.36 | 5.50 | 2.56 | 3.17 | 3.83 | 4.75 |
| | S | 5.96 | 5.96 | 6.43 | 3.88 | 4.88 | 4.67 | 1.90 | 1.30 | 1.56 | 4.67 | 2.71 | 5.15 | 2.50 | 3.18 | 4.33 | 4.00 |
| 8 Prestige (all jobs as a Reference Group) | I | 4.58 | 4.00 | 3.43 | 3.79 | 3.86 | 4.40 | 2.93 | 2.73 | 2.22 | 2.63 | 3.45 | 4.60 | 2.83 | 3.25 | 4.38 | 2.82 |
| | P | 5.00 | 4.80 | 5.29 | 3.28 | 3.50 | 3.50 | 1.67 | 1.36 | NA | 4.00 | 2.91 | 5.13 | 2.22 | 3.00 | 3.50 | 4.25 |
| | S | 5.26 | 5.46 | 5.91 | 3.52 | 4.42 | 4.14 | 1.80 | 1.40 | 1.89 | 3.92 | 2.64 | 4.46 | 2.07 | 2.69 | 3.57 | 3.11 |

[a] Job titles that relate to these job numbers are given in Table 2.

[b] I: Incumbents' Perceptions; P: Peers' Perceptions; S: Supervisors' Perceptions.

TABLE 2

Comparisons of Means on Job Characteristics:

Incumbents vs. Others

| | Dealing with Others | Autonomy | Variety | Friendship Opportunities | Prestige (all) | Feedback | Prestige (craft) | Task Identity |
|---|---|---|---|---|---|---|---|---|
| Line Assigner (6)[a] | + | + | + | + | + | + | + | + |
| Messenger (8) | + | + | + | + | + | + | + | + |
| Supplyman (7) | + | + | + | + | + | + | + | - |
| Frameman (13) | + | + | + | + | + | + | - | + |
| Plant Service Clerk (14) | + | + | + | - | + | + | + | + |
| Plant Reports Clerk (15) | + | + | + | - | + | + | + | - |
| Station Installer (4) | + | - | + | + | + | - | + | - |
| Building Mechanic (9) | + | + | - | - | + | + | + | - |
| Lineman (11) | + | = | + | + | + | - | - | - |
| Deskman (1) | + | + | + | + | - | - | - | - |
| C. O. Equipmentman (12) | + | + | + | + | - | - | - | - |
| Reports Clerk (16) | - | + | = | + | - | + | - | - |
| Station Repairman (5) | = | - | + | - | - | - | - | + |
| Splicer (10) | - | + | - | + | - | - | - | - |
| PBX Installer (2) | + | - | - | - | - | - | - | - |
| PBX Repairman (3) | - | - | - | - | - | - | - | - |

Note: + indicates incumbent's mean > all others' mean

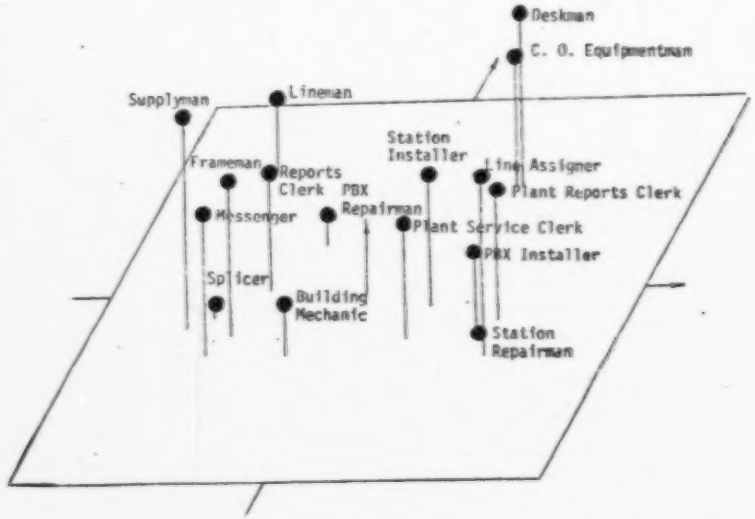
- indicates incumbent's mean < all others' mean

= indicates incumbent's mean = all others' mean

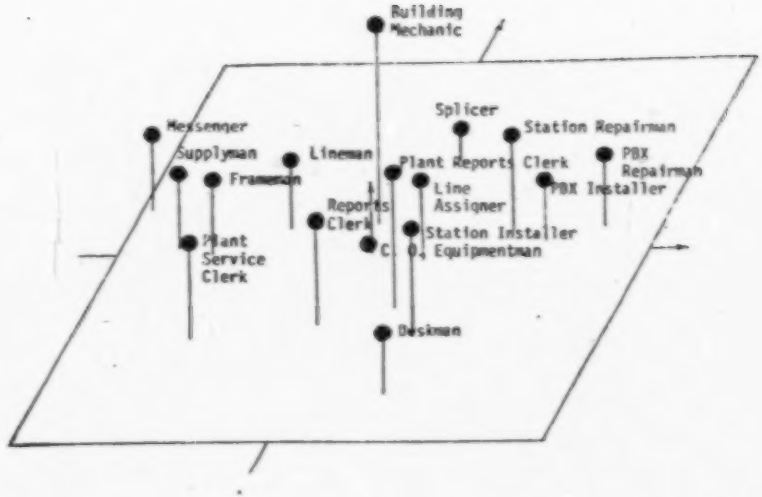
[a]Paranthetical entries refer to job numbers in Table 1.

FIGURE 1

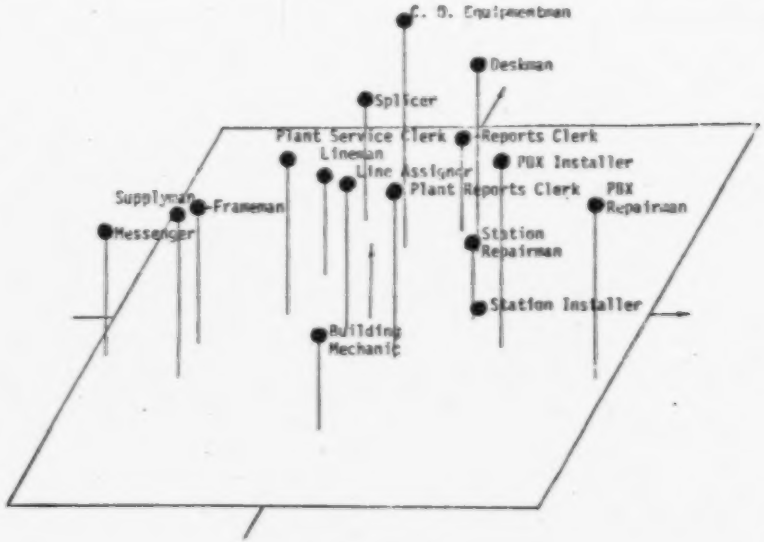
Distances Among Sixteen Jobs as Rated by Incumbents, Supervisors, and Peers




A. Incumbents




B. Peers

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